1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : COLORTREND® BROWN OXIDE I
Synonyms : Pigment Dispersion
Product Use/Class: Aqueous Colorant

Supplier/Manufacturer:
DEGUSSA Corp./CREANOVA Inc.
379 Interpace Parkway
Building C
P.O Box 677
Parsippany, NJ 07054-0677
Product Regulatory Services, Information Number: 973-541-8060

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients

	CAS Number	% (Wt./Wt.)
Iron oxide	001332-37-2	10 - 30 %
Ethylene glycol	000107-21-1	10 - 30 %
NJTSR No. 56705700001-5630P	Trade Secret	10 - 30 %
Talc, Magnesium silicate hydrate	014807-96-6	10 - 30 %
NJTSR No. 56705700001-5043P	Trade Secret	5 - 10 %
Diethylene glycol	000111-46-6	5 - 10 %
NJTSR No. 56705700001-5030P	Trade Secret	1 - 5 %
NJTSR No. 56705700001-5750P	Trade Secret	1 - 5 %

See Section 8 for Exposure Guidelines

3. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW ***:**
COLORTREND colorants may cause eye, skin and respiratory tract irritation.

POTENTIAL HEALTH EFFECTS

Eye Contact:
According to test results on COLORTREND base mixtures, this product is classified as a moderate eye irritant. May cause tearing, reddening and/or swelling.

Skin Contact:
COLORTREND colorants may cause irritation.

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3. HAZARDS IDENTIFICATION (CONTINUED)

Inhalation:

Toxic. Harmful if inhaled. COLORTREND colorants may cause irritation.

Ingestion:

Moderately toxic. May be harmful if swallowed.

Ingestion of ethylene glycol may cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, irritability, and central nervous system effects. Swallowing large volumes of ethylene glycol causes severe kidney damage and cardiopulmonary effects (metabolic acidosis) which may be fatal. The human oral lethal dose is approximately 1.6 g/kg.

Ingestion of excessive amounts of diethylene glycol causes abdominal discomfort or pain, nausea, vomiting, dizziness, central nervous system effects, kidney damage and cardiopulmonary effects (metabolic acidosis) which may be fatal (estimated human oral lethal dose, 1.0 to 1.2 g/kg) and may cause liver effects.

General:

Ethylene glycol may aggravate an existing kidney disease. Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material. Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and drowsiness.

Prolonged inhalation of iron oxide dust is known to produce a condition known as siderosis. On X-rays it appears to be a benign pneumoconiosis and is not associated with pulmonary fibrosis or disability unless there is concurrent exposure to other fibrosis producing materials such as silica.

Short term exposures to talc may cause lung irritation. Long term excessive exposure to talc dust may cause talcosis, a pulmonary fibrosis which in turn may lead to severe and permanent damage to the lungs.

NTP Toxicology and Carcinogenesis Studies of Talc revealed that there is some evidence of carcinogenic activity in male rats and clear evidence of carcinogenic activity in female rats. There was no evidence of carcinogenic activity in male or female mice.

Some studies have linked exposure of NJTSR No. 56705700001-5750P dust to lung effects. IARC classifies NJTSR No. 5750P as a Category 2B Carcinogen (known animal carcinogen, possible human carcinogen) based on inhalation studies. However, the manufacturers state that epidemiologic studies of workers in the U.S. and W. Europe show no significant adverse health effects due to occupational exposure. Because this product is a free-flowing liquid or paste, dust inhalation is not an expected route of exposure.

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3. HAZARDS IDENTIFICATION (CONTINUED)

4. FIRST AID MEASURES

FIRST AID

Eye Contact:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes or until all material has been removed. Obtain medical attention.

Skin Contact:
Flush skin with plenty of water. Remove contaminated clothing. Obtain medical attention if irritation develops or persists.

Inhalation:
If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

Ingestion:
If swallowed give two glasses of water and induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

Flash Point: Not Determined
Flash Point Method: Not determined
Lower Explosive Limit: Not determined
Upper Explosive Limit: Not determined

OSHA Flammability Classification: None
Autoignition Temperature: Not Determined

Other Flammable Properties:
Burning will produce hazardous compounds including oxides of: carbon. nitrogen. sulfur. Contains material that can burn in fire if contained water is evaporated by heat or fire.

Extinguishing Media:
In case of fire, use water (flood with water), dry chemical, CO2 or "alcohol" foam.

Fire Fighting Procedures:
As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

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5. FIRE FIGHTING MEASURES (CONTINUED)

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled:

Ventilate area. Absorb spill with inert material and place in a chemical waste container. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil. Use personal protective equipment as described in Section 8.

7. HANDLING AND STORAGE

Handling:

Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Wash thoroughly after handling.

Storage:

Store in a cool, dry place. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

	Value	Limit	Reference
Iron oxide	10 mg/m3	TWA	OSHA
	5 mg/m3	TWA	ACGIH
	N.E.	STEL	OSHA/ACGIH
Ethylene glycol	100 mg/m3	Ceiling	ACGIH
	50 ppm	Ceiling	OSHA
	N.E.	TWA	OSHA/ACGIH
	N.E.	STEL	OSHA/ACGIH
	100 mg/m3	CEV	ONTARIO
NJTSR No. 56705700001-5630P			
Talc, Magnesium silicate hydrate	20 mppcf	TWA	OSHA
	2 mg/m3	TWA	ACGIH
	N.E.	STEL	OSHA/ACGIH
NJTSR No. 56705700001-5043P	N.E.	TWA	OSHA/ACGIH
	N.E.	STEL	OSHA/ACGIH
Diethylene glycol	N.E.	TWA	OSHA/ACGIH
	N.E.	STEL	OSHA/ACGIH

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

NJTSR No. 56705700001-5030P	N.E.	TWA	OSHA/ACGIH
	N.E.	STEL	OSHA/ACGIH
NJTSR No. 56705700001-5750P	3.5 mg/m3	TWA	OSHA/ACGIH
	N.E.	STEL	OSHA/ACGIH

Other Exposure Limit Information:
The exposure value for ethylene glycol is given as an aerosol. The AIHA WEEL for diethylene glycol is 50 PPM for total vapor and aerosol and 10 mg/m3 for aerosol alone (eight hour time-weighted averages). The OSHA TWA and ACGIH TWA exposure values for talc are for asbestos free talc expressed as millions of particles per cubic foot (mppcf). The exposure limit for iron oxide is for dust and fume as Fe.

Engineering Controls:
Use adequate ventilation.

Respiratory Protection:
A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Eye Protection:
Use chemical splash goggles.

Skin Protection:
Use impermeable gloves.

Other Protective Equipment:
A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure	:	17 mm Hg @ 68°F
Vapor Density (Air = 1)	:	Is heavier than air
Specific Gravity	:	~1.7
Boiling Point	:	>212°F
pH @ 100.0%	:	8.0 to 9.4
Viscosity	:	75-90 KU @ 77°F
VOC Content (lbs./gal.)	:	4.76
Evaporation Rate	:	Is slower than Butyl Acetate

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9. PHYSICAL AND CHEMICAL PROPERTIES (CONTINUED)

Other Properties:
Brown. Paste. Glycol odor. Solubility in water: Dispersible.

10. STABILITY AND REACTIVITY

Stability:
This product is stable under normal storage conditions.

Hazardous Polymerization:
Will not occur under normal conditions.

Conditions To Avoid:
Not Applicable.

Incompatibility With Other Materials:
Oxidizing materials. Strong acids.

11. TOXICOLOGICAL INFORMATION

Component Toxicological Information:

Iron oxide
Oral LD50 (rat): > 5000 mg/kg

Ethylene glycol
Oral LD50 (rat): 4700 mg/kg
Dermal LD50 (rabbit): 9530 mg/kg
Inhalation LC50 (rat): 1460 ppm/4H

Diethylene glycol
Oral LD50 (rat): 20,760 mg/kg
Dermal LD50 (rabbit): 13,300 mg/kg

Supplementary Information:
According to long-term animal inhalation studies, very high concentrations of diethylene glycol vapors caused central nervous system effects in mice and rats. However, an extensive review of the literature shows that no such effects have been documented in humans (Patty's Industrial Hygiene and Toxicology, 1982, Third Revised Ed., Vol 2c, p 3838).

Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. However, there is no available

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11. TOXICOLOGICAL INFORMATION (CONTINUED)

information to suggest that ethylene glycol has caused birth defects in humans.

In a continuous breeding study of mice, continued ingestion of large amounts of diethylene glycol (6 g/kg/day) caused an adverse effect on fertility and some embryotoxic and fetotoxic effects concurrent with some maternal toxicity. The relevance of these very high doses to humans is uncertain.

12. ECOLOGICAL INFORMATION

No product ecological data available

13. DISPOSAL CONSIDERATIONS

Disposal Method:

Waste must be disposed of in accordance with federal, state, provincial and local regulations. CONTAINER DISPOSAL: Empty containers by removing the top and inverting to allow all free flowing product to drain. To meet regulatory criteria, the container is considered empty when less than 3% remains in the container. Additional special handling is not typically required and the empty container can be discarded with other non-hazardous trash.

Note: Local disposal regulations may be more stringent and require additional restrictions or precautions. Customers should check with their local disposal company, municipal or state authority. Recycle of plastic or metal containers may require clean rather than empty containers. In this case the containers can be rinsed with water until the containers are considered generally product free.

14. TRANSPORT INFORMATION

U.S. DOT Transport Information

Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

OSHA:

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard.

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15. REGULATORY INFORMATION (CONTINUED)

Clean Air Act Section 112:
This product contains the following components present at or above the OSHA de minimus level and listed as Hazardous Air Pollutants:

	CAS Number	Wt. %
Ethylene glycol	000107-21-110	- 30 %

This product contains the following components present at or above the OSHA de minimus level and listed as Extremely Hazardous Air Pollutants:

None

SARA Section 302:
This product contains the following components listed as Extremely Hazardous Substances:

None

SARA Section 311/312:
Hazard Classifications: Immediate (acute), Delayed (chronic)

SARA Section 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

	CAS Number	Wt. %
Ethylene glycol	000107-21-1	30(max)

TSCA:
This product or its components are listed in or exempt from the TSCA inventory requirements.

This product contains the following non-proprietary substances subject to export notification under Section 12(b) of TSCA:

None

State Regulations
California (Proposition 65):
This product contains the following substances known to the State of California to cause cancer:

None
This product contains the following substances known to the State of California to cause adverse reproductive effects:

None

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15. REGULATORY INFORMATION (CONTINUED)

International Regulations
Summary of International Chemical Inventory Status

Canada	On inventory
Europe	On inventory
South Korea	Not on inventory
Australia	On inventory

16. OTHER INFORMATION

HMIS Ratings: Health - 2* Flammability - 1 Reactivity - 0
Ratings Key: 4 = Highest hazard, 0 = Lowest hazard,
* = Chronic health hazard, N = No rating for powders
NFPA Ratings: Health - 1 Flammability - 1 Reactivity - 0
Ratings Key: 4 = Highest hazard, 0 = Lowest hazard, N = No rating for powders

Key to abbreviations used:

NA	Not applicable
NAV	Not available
NE	Not established
NJTSR No.	New Jersey Trade Secret Registry Number
®	Registered Trademark.
TM	Trademark.

Revision Summary:
The following MSDS sections were revised since the previous version August 21, 1995:

11. TOXICOLOGICAL INFORMATION